



COPPER ELECTROLYTIC SOLUTION AND
ELECTROLYTIC COPPER FOIL PRODUCED THEREWITH

ABSTRACT

~~It is an object of the~~The present invention ~~to~~
~~provide~~provides a copper electrolytic solution used to
obtain a low-profile electrolytic copper foil with a low
surface roughness on the rough side (the opposite side from
the glossy side) in the production of an electrolytic
copper foil using a cathode drum, and, more particularly,
to provide a copper electrolytic solution used to obtain an
electrolytic copper foil that has excellent transmission
loss characteristics at a high frequency, can be finely
patterned, and has excellent elongation and tensile
strength, both at ordinary ~~temperature~~ and high
~~temperature~~temperatures. The copper electrolytic solution
of the present invention contains ~~as additives~~ (A) at least
one quaternary amine salt selected from the group
consisting of (a) quaternary amine salts obtained by a
reaction between epichlorohydrin and an amine compound
mixture composed of a secondary amine compound and a
tertiary amine compound, and (b) polyepichlorohydrin
quaternary amine salts, and (B) an organic sulfur compound.